

FIG. 1 - PRODUCT CYCLE

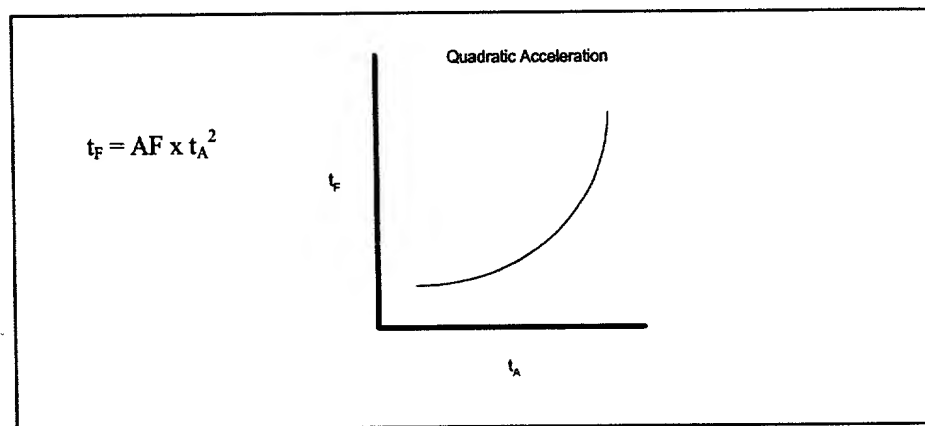


Figure 2 - Quadratic Acceleration

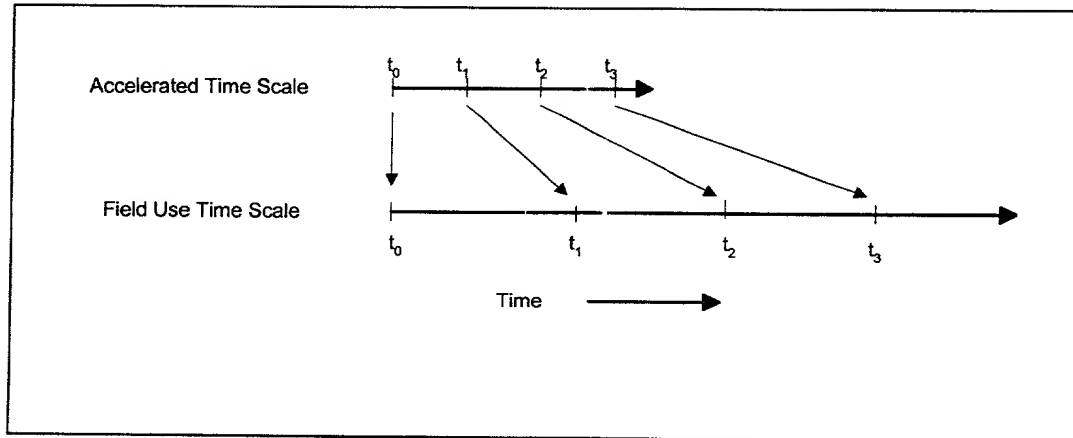


FIG. 3 - Correlation between Accelerated and Field Use Time Scales

Unit A

	CSS	HSS	RT	Vib	CE
HALT 1 First Failure (time to failure in minutes)	120	81	14	53	55.5
HALT 2 First Failure (time to failure in minutes)	91.5	90.5	63	83.5	87
\hat{R}_i (see eq.4)	0.58	1.25	20.25	2.48	2.46
\hat{R}_i^* (see eq. 5)	-.54	.22	3.01	0.91	0.90

\bar{R}^* (see eq. 6) 0.90

\bar{R}

BOM MTBF 298462

MTBF for Redesigned Unit 734221

(see eq. 12)

90% Confidence Limits for R

(see eq.11)

Lower Limit 0.17

Upper Limit 35.1

FIG. 4

Unit B	CSS	HSS	RT	Vib	CE
HALT 1 First Failure (time to failure in minutes)	73.5	83	89	50	11
HALT 2 First Failure (time to failure in minutes)	121.5	83	13.5	110	13.5
\hat{R}_i (see eq.4)	2.73	1.00	0.02	4.84	1.51
\hat{R}_i^* (see eq. 5)	1.01	0.00	-3.77	1.58	0.41

$$\bar{R}^* \text{ (see eq. 6)} \quad -0.16$$

\bar{R}

BOM MTBF 232000

MTBF for Redesigned Unit 199520

(see eq. 12)

90% Confidence Limits for R

(see eq.11)

Lower Limit 0.06

Upper Limit 12.23

FIG. 5

Unit C	CSS	HSS	RT	Vib	CE
HALT 1 First Failure (time to failure in minutes)	89	72	33	73	49
HALT 2 First Failure (time to failure in minutes)	112	78	100	63.5	19.83
\hat{R}_i (see eq.4)	1.58	1.17	9.18	0.76	0.16
\hat{R}_i^* (see eq. 5)	0.46	0.16	2.22	-0.28	-1.81

$$\bar{R}^* \text{ (see eq. 6)} \quad 0.15$$

\bar{R}

BOM MTBF 363300

MTBF for Redesigned Unit 421428

(see eq. 12)

90% Confidence Limits for R

(see eq.11)

Lower Limit 0.08

Upper Limit 16.61

FIG. 6